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PERSPECTIVE

PEOPLE AND NATURE | BRITISH ECOLOGICAL SOCIETY

Shared personal reflections on the need to broaden the scope of conservation social science

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Abstract

1. Social science has a more diverse and meaningful role to play in conservation science and ecology than is currently being published within this field.
2. We reflect on our personal research experiences to demonstrate how our in-field learning has provided us with shared understandings of the importance of a broader engagement with social science methods, methodologies and philosophy.
3. We focus on the value that comes from understanding that social science is not just answers, but *stories*; not just data, but *meaning*; and that *place* is a critical part of understanding socio-ecological phenomena and processes.
4. We engage in a shared process of reflexivity of our doctoral research experiences to show the potential of social science beyond its predominant positivist applications in the conservation science and ecology literature. We each discuss our experiences of our social science research endeavours in the context of private land conservation. We then distil our experiences into three themes that aim to advance social science engagement for conservation scientists: the partiality of knowledge, situating research within socio-ecological context and researcher positionality.
5. We conclude by acknowledging that as researchers we are not the exclusive authority on knowledge; that a deep understanding of conservation and ecology challenges might not provide simple or reducible answers that can be abstracted and applied universally; and that we must reflect on the possibilities for a more plural and diverse research practice for conservation and ecology through a wider engagement with the social sciences.

KEYWORDS
experience, narrative, reflexivity, research design, situated human–environment interactions, socio-ecological systems, stories

1 | INTRODUCTION

Engagement with social sciences in socio-ecological research continues to increase (Crandall et al., 2018; Moon, Brewer, Brewer, Januchowski-Hartley, Adams, & Blackman, 2016; Rissman & Gillon, 2017). Yet, to date, the majority of qualitative social science published in conservation and ecology journals has focused on a relatively narrow set of concepts, methods and philosophies (e.g. Moon

et al., 2016). Researchers who publish in this field can be self-identified conservation scientists, or part of a broader 'transdisciplinary field' that attracts researchers from various backgrounds ranging from social sciences, ecology, conservation and restoration, among others. We use the term 'conservation science' to broadly represent these communities as researchers who apply 'both natural and social sciences to the dynamics of coupled human–natural systems' (Kareiva & Marvier, 2012, p. 962). Much of the research published in this field is reductionist, seeking to define, quantify and predict elements of socio-ecological systems (see Moon et al., 2019). While having a clear value, one of the major consequences of these 'positivist' approaches (i.e. to posit, observe, derive logical truths) is that the research can produce an unintended level of certainty about phenomena or surety of results and obscure the complexity of socio-ecological relationships (Jerrim & De Vries, 2017). As such, some of the assumptions that are made about the interactions and relationships between people and nature on the basis of our narrow engagement with social science do not always hold up in practice (Gould, Phukan, Phukan, Mendoza, Ardoin, & Panikkar, 2017; Jerrim & De Vries, 2017).

Another consequence of conservation science continuing along a largely positivist social science trajectory is that it closes off many elements of research design and implementation that are available to deepen our understanding and engagement with the social world. Many social scientists, for example, do not seek to establish laws or find regularities, instead they trace the development of phenomena to explore a deep and nuanced understanding of research subjects within a research context (Crotty, 1998). Failing to engage with a more complex set of research elements, including positionality, reflexivity and philosophy (e.g. ontology, epistemology), can limit our opportunities to truly understand people and the way they interact with their environments.

Our aim here is to use a shared process of reflexivity on our research experiences to show the potential of social science beyond its dominant application in the conservation science and ecology literature. In particular, we focus on the value that comes from understanding that social science is not just answers, but *stories*; not just data, but *meaning*; and that *place* is a critical part of understanding socio-ecological phenomena and processes. As has been extensively argued, by limiting how we see, experience or understand social science approaches, we limit the diversity of ways through which we can explore socio-ecological worlds. Our aim builds on Bennett et al. (2017) in their directive for 'mainstreaming' social science in conservation; we focus specifically on their call for 'reflection on past and present practice' (Bennett et al., 2017, p. 65) by offering personal stories of social science experience. We do this in the hope that the experiences we share will resonate with others in the field, and that our stories of shifting practices and ideas over time offer an accessible means of demonstrating the value of a wider engagement with social science in the conservation science and ecology research community. As Maynes, Pierce, Pierce, and Laslett (2008, p. 6) note, telling stories can be extremely important for shedding light on phenomena that may be 'otherwise opaque' without illustration through personal narrative.

This paper progresses by exploring three stories of social science research endeavour in the context of private land conservation. The work discussed formed part of the PhD theses of the authors of the paper. Three themes are then distilled from these stories to form a discussion that aims to advance social science engagement for conservation scientists: the partiality of knowledge, situating research within socio-ecological context and researcher positionality.

2 | PERSONAL STORIES

2.1 | From interviews to placed-based understandings

> If you want to study people's behaviour and their interaction with their environment, the observations and informal conversations of field studies will usually give more valid knowledge than merely asking subjects about their behaviour (Kvale & Brinkmann, 2009, p. 115).

As part of my PhD, I (Ben) wanted to understand how landholders pursued conservation on their property when they used their land primarily for amenity. During my PhD, I undertook training in social science research methods and approaches. Prior to this research, I completed an applied science (Environmental Management) undergraduate degree and Honours in geography. Before starting my PhD, I worked in a local government role that involved engaging private landholders in conservation activities, which made me keen to explore in more depth how people understood and enacted conservation. To bring this focus into my PhD, I adopted walking interviews with landholders that were involved in different forms of private land conservation practice in Victoria, Australia.

My decision to integrate property walks into research on private land conservation was suggested by a colleague during the confirmation of my PhD candidature. While seeming like a good idea for the purposes of seeing for myself what types of conservation work was being done, rather than just talking about it, the full benefit of the walking methodology was not revealed until I began the exercise and subsequently delved into the literature. Through human–environment interactions, I was able to see how ecologies can often be active agents in not only conservation practice itself, but the research process, structuring and catalysing the research encounter (Cooke, 2017). In this sense, the walks highlighted the way that landscapes can embody a history of human–environment interaction that shapes conservation activities and the way we understand them, which can easily be obscured from view without such engagement.

Through the walking interviews, I found that sometimes paths or fence lines directed the journey with a landholder. But even more revealing to me was the way that specific plants guided the way. The

presence (or absence) of certain plants has thus helped to shape my understanding of conservation practices as a researcher. In one case, a specific invasive weed (Ragwort – *Senecio jacobaea*) was identified during a walk that was not thought to be present on the property during the interview with a landholder. Ragwort is small and herbaceous, it spreads from seed and it can supress or out-compete other plants. Once a single Ragwort plant was observed, it drew us from the path to its location, where it was swiftly pulled out. As other Ragwort plants were identified, they too were removed – a process in which I participated. We moved through the bush tracking the weeds as we discussed the difficulty of managing re-infestation of restoration sites, how and when to intervene in ecologies as they grow and change, the challenges of doing conservation work as we age and the fact that it was hard to find the time to just wander around and see what was happening on the property when life was busy with distraction.

As Strang (2010) identifies, walking interviews are useful for eliciting stories, because material environments with cultural significance act as repositories of memory and experience (see also Abel, Ross, Ross, & Walker, 1998). Evidence for the value of this approach was also noted by Knapp and Fernandez-Gimenez (2009, p. 502) in their research on ranchers' farming practices, suggesting 'the field component was helpful for connecting knowledge to specific places and practices'. This form of situated research encounter and the processes of moving through a landscape brings place into the conversation. In my example, walking interviews opened up an awareness of the socio-ecological contexts in which conservation takes place, including the history of land use and landscape change, and the uncertainty of managing emergent ecologies (Waitt, Gill, Gill, & Head, 2008).

For my research, walking interviews brought the agency of more-than-humans into the conservation process. By suggesting plants have agency, I am saying that their liveliness extends beyond their responses to the biophysical conditions in which they are situated (Watts, 2013). In simple terms, the capabilities of plants (like growing, moving, spreading and even dying) play an active role in shaping the way people understand and engage with ecologies through conservation. This means, for example, that knowledge of how to manage or conserve plants is often co-produced through direct human–plant relations rather than detached human observation (Atchison & Head, 2013). As told in the story above, plants actively shaped how conservation work unfolded, and how we understood that work from a research perspective. It helped to show me that plants are not passive recipients of conservation action, but active participants in shaping a trajectory of conservation outcomes (Cooke, 2017). Walking interviews offered me a deeper engagement with socio-ecological worlds. But most importantly, they showed the importance of making room for social science modes of understanding in conservation and ecology that make visible a wider array of human–environment relations.

2.2 | From 'answers' to stories

I (Vanessa) completed dual undergraduate degrees in Biology and Mathematics with honours in ecological modelling and training in actuarial science. I further trained as an actuary including courses and professional accreditation exams in financial mathematics and economics before embarking upon a PhD that integrated economics with conservation planning. During my PhD training, I developed an interest in private land conservation programs, as my eyes were opened to the limitations experienced by governments (such as money for land purchase and human capacity to manage the land) and the necessity to engage with private landholders to achieve conservation goals. Reflecting my personal training in financial mathematics and economics I approached my original research with a positivist approach, asking how much it would cost to manage private land for conservation (using quantitative surveys) and how likely landholders are to engage in stewardship arrangements (applying a choice model experiment) – in the Northern Territory, Australia – under differing management arrangements (Adams, Pressey, Pressey, & Stoeckl, 2012, 2014a, 2014b). This approach took me to farms and cattle stations where I spoke to landholders about their properties, their connections to land and the reasons they cared about land management.

My story is similar to Ben's in that the research at the outset was not about understanding individual landholders' personal motivations for engagement or how their stories related to the reasons for planning in the region. But as I reflected on my informal conversations with landholders, as they showed me around their properties, and as they invited me to their town gatherings, I came to understand the realities of what it meant for these individuals to participate in a stewardship programme and the need for a more diverse approach to understanding these motivations. This awareness does not discount my original positivist approach to eliciting the likelihood of participation in a programme (with the choice model experiment) or the financial costs of a programme (based on the quantitative survey). My research provided policy-relevant findings for government and non-government agencies interested in funding stewardship programmes. However, by engaging in a process of reflexivity, I identified that these approaches did not capture the much more nuanced reasons why individual landholders would choose to participate and what they might expect from these programmes. This process changed my research philosophy, the way I asked questions and chose relevant methods, and led me to collaborate with researchers experienced in these methods.

In a further iteration of this work, I collaborated with an advisory group in the Northern Territory to design a catchment plan with a clear alignment to landholder well-being (Adams, Pressey, & Stoeckl, 2014a, 2014b). As part of this work, the landholders suggested that they tell their stories, why they wanted a catchment plan, how they would use it and what it meant to live in this place. Essentially, there was a thirst on their part for narrative and I think, in part, that it was driven by a desire to own their stories and intellectual property rather than allowing us to interpret their words. The landholders were co-designers of the questions and asked for a role in curating these stories into a single video. While this part of the work remains unfinished, the stories, we heard were diverse and they only further solidified my belief that the motivations of landholders to participate in programmes are as many as the number of properties

in the catchment. This experience of co-creating a collective narrative of a place with the participants challenged my positionality as a researcher.

My experience of discovering a need for methods that allow for a deeper understanding of landholder motivations and desires for private land conservation reflects an emerging discussion in the literature about qualitative social science methods to provide 'rich descriptions' of complex systems (Dressler et al., 2010; Evely, Fazey, Fazey, Pinard, & Lambin, 2008; Gould et al., 2017; McClenachan, Ferretti, Ferretti, & Baum Julia, 2012; Rissman & Gillon, 2017). Qualitative methods such as narrative analysis and ethnographic interviews are currently relatively limited when it comes to publications in conservation and ecology journals (Moon et al., 2016). Yet, these methods can complement other methods to demonstrate the richness of complex socio-ecological systems that I found missing in my own work (Rissman & Gillon, 2017). By being open to new ways of understanding phenomenon, and in reflecting on my position as a researcher, I was open to a different way of conducting research. I moved from an 'outsider' (Berger, 2015) to a facilitator in a joint-learning process (Pohl et al., 2010).

The narratives that we constructed for the region, and the role of planning, provided a deeper understanding of the meaning of a plan for the people it would affect. Plans are often perceived as paper documents that sit on shelves or, perhaps when opened, guide policymakers' action, even though they can be disconnected from the place for which the plan speaks. Our work brought the 'plan' to life, as a manifestation of the landholders' role as place-makers in the catchment and as owners and partakers of its future destiny. The ways in which the plan could define their future lives expanded from simplistic statements around land use to deeper statements of what it means to live in a rural and isolated environment; and therefore what a plan must include to be effective, such as building communities to a sustainable size to enable the building and survival of schools, and providing access to reliable energy rather than expecting farms to run on individual generators.

2.3 | From data to meaning

I (Katie) completed an undergraduate degree in Environmental Science with honours in rainforest ecology. After time spent working in government and consulting in Australia and Europe, and completing a Masters degree in Sustainable Management, it became obvious that environmental problems, as often claimed, are typically social problems. I knew that my knowledge within the natural sciences was limited in attempting to understand these problems, so I embarked on a PhD in social science to explore some of the questions that were occupying my mind, typically, why do people behave in ways that do not account for the health of ecosystems (e.g. littering, over-consumption, ecosystem degradation)? I largely brought my post-positivist perspective to bear on my initial research programme. During the candidature, as my knowledge and experience of social science research methods and methodologies developed, my philosophical perspective changed, in terms of what knowledge to seek and how to do so. I engaged landholders but had had no experience of living 'on the land' and so participated, throughout the research, in a process of reflection as to the meaning or legitimacy of my research approach as an 'outsider' (Berger, 2015). Here, I discuss how, through processes of reflexivity, I was able to track how my approach to research changed over time on the basis of what I thought I knew and how this evolution in thinking has shaped my current approach to research.

I really wanted to understand what motivated landholders to conserve biodiversity through formal government programmes. I hoped to use the findings to inform programme design so that private land conservation programmes reflected the needs, perspectives and values of landholders, thereby increasing participation rates. During my PhD, I interviewed landholders across Queensland, Australia, almost all of them on their property. Some of those interviews were brief; others were longer and included an overnight night stay on the property. After I had conducted all of my interviews and was analysing my data, it became increasingly clear to me that my data were not telling me important parts of the story, which I had 'come to know' through my time spent with the landholders. While my data were helpful in answering specific research questions (e.g. Moon & Cocklin, 2011, Moon & Cocklin, 2011), it failed to capture the complexity of decision-making processes and some of the important relationships between landholders and their land.

I reflected, for example, on a number of my questions that were quite unhelpful in providing a more complete picture of the decision-making context of landholders. For instance, I asked participants 'What is the single most important issue for you as a landholder?' I had assumed that landholders would be able to isolate one issue and that it was meaningful for them to do so. Instead, as one landholder explained: 'It's a balance of climate, input costs, interest rates, calving rates, markets and government regulation. All those things are out of your control, like you've got absolutely no control over the climate'. My questions had not allowed for the complexity and interrelatedness of the different factors that contribute to landholder decision-making. I had expected that I could *reduce* the motivations and barriers of private land conservation to a discrete set of variables or classifications. While discrete classifications can be valuable, particularly in policymaking (Knight et al., 2019), they are not always useful in providing a complex understanding of a decision-making context.

I had also not given adequate consideration to the value of *meaning* in understanding differences and similarities between landholders. I had initially thought that it would be meaningful to characterize landholders on the basis of their programme enrolment. From here, I thought it might be possible to predict the 'types' of landholders who might have preferences for some programmes over others. I started to realize, however, that a more meaningful distinction was between producers and non-producers, not as 'types' per se, but more as a way to differentiate between decision-making contexts. This simple differentiation, while ostensibly intuitive, is also deep and complex. A landholder's reliance on the land for income can shape their experience of, and interaction and intimacy with, their landscape, influence who they connect with,

how much of their time they spend on the land, how resilient, or not, they are to external factors, what risks they are exposed to, what land management aspirations they have and what lifestyle choices they make. I came to realize that although landholder categories and heuristics based on statistical models are important in providing quick and easy advice to programme administrators, such approaches can only be meaningful if they accommodate the deeper significance of the essence of that differentiation, in this case, land ownership. The essence of land ownership could include, for example, sense of place (Jorgensen & Stedman, 2001; Ryden, 1993; Tuan, 1979), identity (Allan, 2005; Burton & Wilson, 2006; Hitlin, 2003), value orientations (Frost, 2000; de Groot & Steg, 2008; Holmes & Day, 1995), social resilience (Adger, 2000; Carpenter & Brock, 2004; Folke, 2006; Marshall, 2010) and traditional knowledge (Berkes, Colding, Colding, & Folke, 2000; Tsosie, 1996; Turner, Ignace, Ignace, & Ignace, 2000).

Since completing my PhD, I have become more interested and engaged in qualitative work and continue to explore different ontologies, epistemologies and methodologies (Moon & Blackman, 2014; Moon et al., 2019). I consider that the ontological positioning of my research has shifted from one of critical realism (i.e. that one reality exists and can be captured by broad critical examination), to one of bounded relativism (i.e. that different versions of reality can exist, but are usually shared within bounded groups) (Moon & Blackman, 2014). Currently, I am working on a project that adopts constructivist grounded theory methodology (Charmaz, 2006) to explore the ethical, philosophical and practice-based journeys of landholders who see property rights as owing a responsibility to country and community, rather than an exclusive right of private possession. Processes of reflexivity have provided me with exciting opportunities to develop and evolve as a social scientist.

3 | WHAT TO MAKE OF THESE STORIES OF CONSERVATION SOCIAL SCIENCE?

Our personal experiences have provided a number of shared understandings and realizations that have changed the way we approach our research. In this section, we distil our narratives into three broad insights that are not intended as a prescription for doing conservation social science, but are offered as avenues for thinking and reflecting on the role or contribution of social science for interested colleagues. In offering these insights, we are not trying to advocate for a particular method or set of methods, but rather, to show how our engagement with social science has allowed us to deepen our understanding of social phenomena, socio-ecological systems and the diverse contexts in which conservation takes place. We are not trying to 'teach' natural scientists about how to become social scientists, to suggest a wholesale shift from positivist to interpretivist social sciences, or to suggest that social sciences are the preferred approach to all conservation research problems. We are simply attempting to contribute to an ongoing discussion in this space in a more personal way, in the hope that those entering and already engaged in primarily positivist social sciences might connect with our ideas, approaches or perspectives.

3.1 | Knowledge is partial

Our experiences of a phenomenon, place, culture or livelihood that we are trying to capture in a social research context are only ever 'knowable' in certain ways. In other words, 'the social world is incredibly complex and dynamic, and evidence, even on quite basic social questions, is rarely black and white. Instead it is often provisional, qualified, and uncertain' (Jerrim & De Vries, 2017, p. 118). Therefore, even at a basic level, our capacity to know what questions are best to ask and what answers are important to seek will always be constrained, and we need to ensure this 'reality' is reflected in the way we present and discuss our work. It can be reflected by asking questions such as: what kinds of claims can I make about phenomena, with what certainty and with what authority; is it worth talking to sociologists or anthropologists, for example, when designing project ideas to help conceive of this work differently, or to position it differently; how do I represent others knowing that my research will never quite reflect the full picture?

Each of our stories provide examples of how asking these questions of ourselves and our research allowed us to understand what was known but equally what was not known. It changed how we asked questions (e.g. Ben situating his questions within the context with place-based methods), which questions we asked (e.g. Katie's reflection on which questions were unhelpful, and which questions needed to be asked instead), and how we chose to answer these questions (e.g. through co-production of knowledge with participants, Vanessa).

The practice of reflexivity allows a researcher to ask these questions and through answering them provides an opportunity to disclose the position they took in their research and to reflect on how that position might have caused them to miss certain important aspects of the research context (e.g. D'Cruz, Gillingham, Gillingham, & Melendez, 2007, Hammersley & Atkinson, 2007; Horsburgh, 2003; Koch & Harrington, 1998). Reflexive statements reveal how another person, coming from a different position and with different experience could have developed a completely different research programme that generated different research outcomes. Understanding how positionality affects the outcomes of research is an important consideration of research design, particularly in terms of assessing the 'trustworthiness' of the research outcomes (Guba, 1981). It also provides researchers with an opportunity to consider the extent to which they can talk about their findings with 'authority'. We see reflexivity as encouraging a perspective that acknowledges multiple authorities with different insights that should be heard, with the researcher offering just one.

Thus, greater reflexivity may assist in achieving a broader cultural shift in conservation and ecology disciplines in how research is conceived, conducted and communicated. We should be encouraging a greater sense of humility to the claims of authority in our research, as we have sought to do in the sharing of our perspectives

here. It is our hope that we can support the forging of a research culture where humility and doubt, within well-designed research programs, are valued rather than seen as a weakness.

3.2 | Situating conservation phenomenon in context

Place-based relationships are fundamental to shaping how conservation plays out, so we must be attentive to how they fit within our research (Country et al., 2018). Attention requires being conscious of what information, knowledge or experience might be hidden from view when we do not have situated experience of a certain phenomenon. Just as importantly though, place offers an important reminder that human–environment relationships and experiences are not homogenous, so we need to be attentive to recognizing difference among people and their experiences in the conduct of conservation social science (Gould et al., 2017). If capturing diversity and complexity in conservation science means deploying 'all available tools and methods to gain deep, contextual understanding' (Rust et al., 2017, p. 5), then a wider engagement with social science is necessary. As Bennett et al. (2017) suggest, more collaborative work may need to be done with social scientists early on in a project to capture contextual dimensions in the research design.

Following on from Ben's story, making place more prominent might also make room for thinking about nonhumans differently in conservation science research. For example, might we gain different insights from thinking about human–environment relations in ways that gives agency to the landscapes or ecologies in which that research is situated (Cooke & Lane, 2018)? Acknowledging nonhuman agency might offer researchers working in settler-colonial contexts a chance to situate their work in relation to Indigenous cosmologies (Country et al., 2018). As Watts (2013, p. 23) notes, 'habitats and ecosystems are better understood as societies from an Indigenous point of view'. Through this way of knowing, 'not only are [nonhumans] active, they also directly influence how humans organize themselves'. Even if such a perspective challenges a particularly constrained research design, might the absence of such considerations be worthy of discussion, especially when reflecting on further research or limitations? We suggest that a deeper engagement with social sciences might offer ways to open up opportunities for sensitivity to different ways of knowing through the conduct of research.

3.3 | Positionality influences perspective

Our own position, as white Westerners in Western and colonial settings, has shaped the way we think about knowledge. A researcher's position includes 'personal characteristics, such as gender, race, affiliation, age, sexual orientation, immigration status, personal experiences, linguistic tradition, beliefs, biases, preferences, theoretical, political and ideological stances, and emotional responses to participant' (Berger, 2015, p. 220). Concepts that we understand and 'know' might have no equivalent whatsoever in other cultures, where individuals and groups are positioned differently. Conversely, it might be impossible for us to truly understand the meaning of concepts, stories and traditions from other cultures, certainly if we continue to observe other cultures through 'imperial eyes' (Smith, 2012).

Our experiences have caused us to be more reflexive about our positionality as researchers, particularly how it affects our processes of research (e.g. design, engagement, interpretation). In fact, our understanding about the need to state our positionality deepened through the reactions of editors and reviewers on an earlier version of this very manuscript. The reviewers and editors could not fully appreciate our stories without a more explicit identification of who we were as storytellers. Thus, the writing process strengthened our practices of reflectivity and contributed to an ongoing process of learning, both with each other, and our academic peers. While it did not necessarily feel comfortable to be explicit about our positionality, we consider that it is not only important to recognize our positions as self-aware researchers, but also to state our positions explicitly for readers in academic articles so they might come to understand our research on a deeper level. Importantly, engaging in processes of reflexivity, alone or with colleagues, is immensely beneficial in providing a space to be honest about the extent of our knowledge, or capacity to know. These processes provide opportunities to deepen and expand our research, by considering alternative knowledge, theories, methodologies and philosophies, allowing us to evolve as researchers, and thus provide richer and more meaningful accounts of the social world over time.

We can think about our position as fitting into one of (at least) three broad types of researcher position: (a) 'when researcher shares the experience of study participants'; (b) 'when researcher moves from the position of an outsider to the position of an insider in the course of the study'; and (c) 'when researcher has no personal familiarity or experience with what is being studied' (Berger, 2015, p. 219). We started our research in a position studying the unfamiliar, which can bring both advantages and disadvantages. Advantages include being 'ignorant' of the subject matter and so putting the research participants in an expert position, and approaching the subject from a new direction, potentially leading to innovative outcomes (Berger, 2015). Disadvantages include not being able to: fully comprehend the experiences of the participants; conceptualize research questions that are relevant to participants' experiences; detect subtle or disguised expressions of themes; and separate from our own cultural, temporal and historic understandings of the world (e.g. Western, colonial) (Berger, 2015). Reflecting on our position has become critical in seeking and understanding the diversity of experience and perspectives, requiring the development of respectful relationships with others.

4 | CONCLUSION

Our personal reflections highlight the value of the tools, methodologies and philosophies of social science in providing more complete and nuanced depictions of socio-ecological systems (Rissman

& Gillon, 2017). These reflections show how our training influenced our initial research design, but how we were able, within the social sciences, to critique and learn from our research experience and report on how our approaches evolved. We advocate for opening up pathways to engage in, and report on, a diversity of social science methods and methodologies. It is important to report on positionality and engage in reflexivity to be clear about what was learnt during the research journey and thus enable honesty about the authority of our knowledge claims. This type of reporting is by no means foreign to positivist science – scientists typically disclose and discuss limitations of their methods and results and offer future recommendations to improve research design and outcomes. Yet, our experience is that similar, honest reflections are sometimes constrained in social science reporting within conservation science (Moon et al., 2016). We must remember that, as researchers, we are not the exclusive authority on describing what is or is not happening, why people do things, or what kind of policy we should implement, where and why. The same level of honest self-critique that we apply to positivist ecological inquiries should translate to social science research in conservation science, as it does in other disciplines and publications within the humanities.

Engaging with a wider social sciences repertoire also means acknowledging that a deep understanding of conservation and ecology challenges might not provide simple or reducible answers that can be abstracted and applied universally. Instead, deeper understandings often reveal the complexity of the places we work in, the particularities of conservation practices and the need for diverse approaches to action. By sharing our stories, we have sought to invite other scholars, particularly conservation scientists, to reflect on the possibilities for making a contribution to a more plural and diverse research practice for conservation and ecology.

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CONFLICT OF INTEREST

The authors do not have any conflicts of interest.

AUTHORS' CONTRIBUTIONS

K.M. conceived of the idea and led the paper conceptually. The content was equally developed by K.M., V.M.A. and B.C.

DATA AVAILABILITY STATEMENT

No data was used in the preparation of this manuscript.

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